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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,222	02/15/2005	Diego Alejandro Moreno Gomez	70200-0008	7494

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EXAMINER

UPTON, CHRISTOPHER

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/500,222

Applicant(s)

MORENO GOMEZ ET AL.

Examiner

Christopher Upton

Art Unit

1724

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hard et al, Francis et al, Revis et al, Chaumont et al, German patent 44 33 413, or the Ashley et al article.

Hard, Francis, Revis, Chaumont, the German patent and the Ashley article each disclose the treatment of radioactive waste water by microorganisms, as claimed.

3. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Alvarez et al.

Alvarez discloses the treatment of radioactive waste water by an immobilized culture on a metal support, including iron alloys such as steel and including the form of beads (balls) (see column 7, lines 31-40), as claimed.

4. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alvarez et al.

Claim 8 recites degreasing and sterilization of the metal ball support. It is submitted that this would normally be done prior to culturing, to provide access to the metal and to avoid undesirable microorganisms. Claims 9 and 10 recite sizing. It is submitted that this would obviously depend on the desired degree of treatment and expected capacity, and therefore fails to patentably distinguish over Alvarez.

5. Applicant's arguments filed on July 18, 2006 have been fully considered but they are not persuasive.

Applicant argues that Alvarez discloses the addition of microorganisms and does not claim the elimination of cobalt 60. IT is submitted that the claims are not limited to cobalt 60, as they recite radionuclides in general, which includes uranium, as disclosed by Alvarez. It is further submitted that the claims do not exclude the addition of microorganisms, and require the formation of a microorganism colony.

With respect to Hard, applicant argues that sulphate reducing bacteria cannot be used and that the process is aerobic. It is submitted that these limitations are not recited in the instant claims.

With respect to Francis, applicant argues that this is a denitrification process. It is submitted that the reference discloses treatment of uranium oxide fuel wastewater.

With respect to Revis, applicant argues that it is not necessary to add nutrient or to use a specific microorganism. It is submitted that these limitations are not recited in the claim.

With respect to Chaumont, applicant argues that the bioreactor of the invention is metallic and does not use photosynthetic microorganisms. It is submitted that these limitations are not recited in the claim.

With respect to the German patent, applicant argues that no carbon source is required, a metallic support is used, and the process may be continuous. It is submitted that these limitations are not recited in claim 1.

With respect to the Ashley article, applicant argues that the instant process is different and that metal ball supports are used. It is submitted that these limitations are not recited in claim 1. Applicant further argues that the article simply proposes a possible process. It is submitted that the use of a microorganisms to remove radionuclides is disclosed, as recited in claim 1.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Atkinson discloses a bioreactor with a steel support.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Upton whose telephone number is 571-272-1169. The examiner can normally be reached on 7:30-5:00, off every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, consisting of a large, stylized 'C' followed by a series of loops and a final flourish.

Christopher Upton
Primary Examiner
Art Unit 1724